

General

Title

Acute leukaemia: proportion of patients with acute leukaemia undergoing treatment with curative intent who have complete diagnostic panel undertaken.

Source(s)

NHS Scotland, Scottish Cancer Taskforce, National Cancer Quality Steering Group. Acute leukaemia clinical quality performance indicators. Edinburgh (Scotland): Healthcare Improvement Scotland; 2016 Jun. 30 p. [19 references]

Measure Domain

Primary Measure Domain

Clinical Quality Measures: Process

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the proportion of patients with acute leukaemia undergoing treatment with curative intent who have complete diagnostic panel undertaken, defined as:

- Morphology;
- Immunophenotyping;
- Cytogenetics; and
- Storage of genetic material for routine diagnostic testing

Note from the National Quality Measures Clearinghouse: This measure is part of the Cancer Quality Performance Indicators (QPIs) collection. For more information, including a complete list of QPI measure sets, please visit the [Healthcare Improvement Scotland Web site](#).

Rationale

Prior to patients undergoing intensive treatment for acute leukaemia the diagnosis must be established and prognostic markers obtained where relevant. Diagnosis and classification is as per World Health Organisation (WHO) 2008, and thus requires morphological, flow-cytometric, cytogenetic and (in selected cases) molecular analysis. Diagnostic material must be obtained and analysed or stored prior to treatment. By incorporating these different testing modalities into the diagnostic pathway, accurate diagnosis and sub classification is possible. A complete panel is required as findings from one test may alter the testing strategy for other techniques (National Cancer Action Team, 2012).

Current guidelines state that morphology, immunophenotyping, and cytogenetic/molecular testing of the bone marrow aspirate are required in the diagnostic evaluation of all patients with suspected acute leukaemia (National Cancer Action Team, 2012; British Committee for Standards in Haematology et al., 2006; National Comprehensive Cancer Network [NCCN], 2013). Together, these studies allow determination of the WHO acute myeloid leukaemia (AML) or acute lymphoblastic leukaemia (ALL) subtype and cytogenetic risk group.

In terms of prognosis, molecular testing has important treatment implications and should be routinely tested for in normal karyotype patients. Unless material is archived at diagnosis testing later will be impossible (Creutzig et al., 2012). While such testing may occur within the context of a clinical trial, it may not be available to the treating clinician and not all patients enter into such a trial. As a minimum it is suggested that nucleic acid is stored on each patient.

Evidence for Rationale

British Committee for Standards in Haematology, Milligan DW, Grimwade D, Cullis JO, Bond L, Swirsky D, Craddock C, Kell J, Homewood J, Campbell K, McGinley S, Wheatley K, Jackson G. Guidelines on the management of acute myeloid leukaemia in adults. Br J Haematol. 2006 Nov;135(4):450-74. [181 references] [PubMed](#)

Creutzig U, van den Heuvel-Eibrink MM, Gibson B, Dworzak MN, Adachi S, de Bont E, Harbott J, Hasle H, Johnston D, Kinoshita A, Lehrnbecher T, Leverger G, Mejstrikova E, Meshinchi S, Pession A, Raimondi SC, Sung L, Stary J, Zwaan CM, Kaspers GJ, Reinhardt D, AML Committee of the International BFM Study Group. Diagnosis and management of acute myeloid leukemia in children and adolescents: recommendations from an international expert panel. Blood. 2012 Oct 18;120(16):3187-205.

National Cancer Action Team. Additional best practice commissioning guidance for developing haematology diagnostic services. London (UK): Royal College of Pathologists; 2012. 28 p.

National Comprehensive Cancer Network (NCCN). NCCN clinical practice guidelines in oncology: acute lymphoblastic leukaemia. Fort Washington (PA): National Comprehensive Cancer Network (NCCN); 2013.

NHS Scotland, Scottish Cancer Taskforce, National Cancer Quality Steering Group. Acute leukaemia clinical quality performance indicators. Edinburgh (Scotland): Healthcare Improvement Scotland; 2016 Jun. 30 p. [19 references]

Primary Health Components

Acute leukaemia; treatment with curative intent; diagnostic panel; morphology; immunophenotyping; cytogenetics; storage of genetic material for routine diagnostic testing

Denominator Description

All patients with acute leukaemia undergoing treatment with curative intent

Numerator Description

Number of patients with acute leukaemia undergoing treatment with curative intent who have complete diagnostic panel undertaken (see the related "Numerator Inclusions/Exclusions" field)

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A clinical practice guideline or other peer-reviewed synthesis of the clinical research evidence

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

Additional Information Supporting Need for the Measure

Unspecified

Extent of Measure Testing

The collection of data is piloted on a small number of patient records using a paper data collection form produced by the Information Services Division (ISD). The aim is to identify any anomalies or difficulties with data collection prior to full implementation. At least one NHS board in each Regional Cancer Network participates in the pilot.

Evidence for Extent of Measure Testing

NHS Scotland. National cancer quality performance indicators: overview of development process. Edinburgh (Scotland): NHS Scotland; 2012 Dec. 7 p.

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Ambulatory/Office-based Care

Hospital Outpatient

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Single Health Care Delivery or Public Health Organizations

Statement of Acceptable Minimum Sample Size

Unspecified

Target Population Age

Unspecified

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Aim

Better Care

National Quality Strategy Priority

Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Getting Better

Living with Illness

IOM Domain

Effectiveness

Data Collection for the Measure

Case Finding Period

Unspecified

Denominator Sampling Frame

Patients associated with provider

Denominator (Index) Event or Characteristic

Clinical Condition

Therapeutic Intervention

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions

All patients with acute leukaemia undergoing treatment with curative intent

Exclusions

None

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions

Number of patients with acute leukaemia undergoing treatment with curative intent who have complete diagnostic panel undertaken

Note: Complete diagnostic panel is defined as:

- Morphology;
- Immunophenotyping;
- Cytogenetics; and
- Storage of genetic material for routine diagnostic testing

Exclusions

None

Numerator Search Strategy

Fixed time period or point in time

Data Source

Electronic health/medical record

Paper medical record

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

Unspecified

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a higher score

Allowance for Patient or Population Factors

not defined yet

Standard of Comparison

not defined yet

Prescriptive Standard

Target: 90%

The tolerance within this target level is designed to account for situations where marrow aspirates fail to yield adequate material.

Evidence for Prescriptive Standard

NHS Scotland, Scottish Cancer Taskforce, National Cancer Quality Steering Group. Acute leukaemia clinical quality performance indicators. Edinburgh (Scotland): Healthcare Improvement Scotland; 2016 Jun. 30 p. [19 references]

Identifying Information

Original Title

QPI 1 – complete diagnostic panel.

Measure Collection Name

Cancer Quality Performance Indicators (QPIs)

Measure Set Name

Acute Leukaemia

Submitter

NHS Scotland - National Government Agency [Non-U.S.]

Scottish Cancer Taskforce - National Government Agency [Non-U.S.]

Developer

NHS Scotland - National Government Agency [Non-U.S.]

Scottish Cancer Taskforce - National Government Agency [Non-U.S.]

Funding Source(s)

Scottish Government

Composition of the Group that Developed the Measure

Acute Leukaemia QPI Development Group

Financial Disclosures/Other Potential Conflicts of Interest

Unspecified

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2016 Jun

Measure Maintenance

The Cancer Quality Performance Indicators (QPIs) will be kept under regular review and be responsive to changes in clinical practice and emerging evidence.

Date of Next Anticipated Revision

2018 Mar

Measure Status

This is the current release of the measure.

Measure Availability

Source document available from the [Healthcare Improvement Scotland Web site](#) .

For more information, contact the Healthcare Improvement Scotland at Gyle Square, 1 South Gyle Crescent, Edinburgh, Scotland EH12 9EB; Phone: 0131 623 4300; E-mail: comments.his@nhs.net; Web site: www.healthcareimprovementscotland.org/ .

Companion Documents

The following is available:

NHS Scotland. National cancer quality performance indicators: overview of development process. Edinburgh (Scotland): NHS Scotland; 2012 Dec. 7 p. This document is available from the [Healthcare Improvement Scotland Web site](#) .

NQMC Status

This NQMC summary was completed by ECRI Institute on April 25, 2017. The information was verified by the measure developer on May 23, 2017.

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Production

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